

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date
24 February 2005 (24.02.2005)

PCT

(10) International Publication Number
WO 2005/018240 A1

(51) International Patent Classification⁷: **H04N 13/00**

AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(21) International Application Number:
PCT/GB2004/003369

(22) International Filing Date: 4 August 2004 (04.08.2004)

(25) Filing Language: English

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(26) Publication Language: English

(30) Priority Data:
0318892.7 12 August 2003 (12.08.2003) GB

(71) Applicants and
(72) Inventors: DAWE, Christopher, Martin [GB/GB]; Birch Tree House, The Street, Petham, Kent CT4 5QU (GB). DAWE, Martin, Simon [GB/GB]; 23F Montpelier Row, Blackheath, London SE 0RL (GB).

(74) Agent: ELKINGTON AND FIFE LLP; Prospect House, 8 Pembroke Road, Sevenoaks, Kent TN13 1XR (GB).

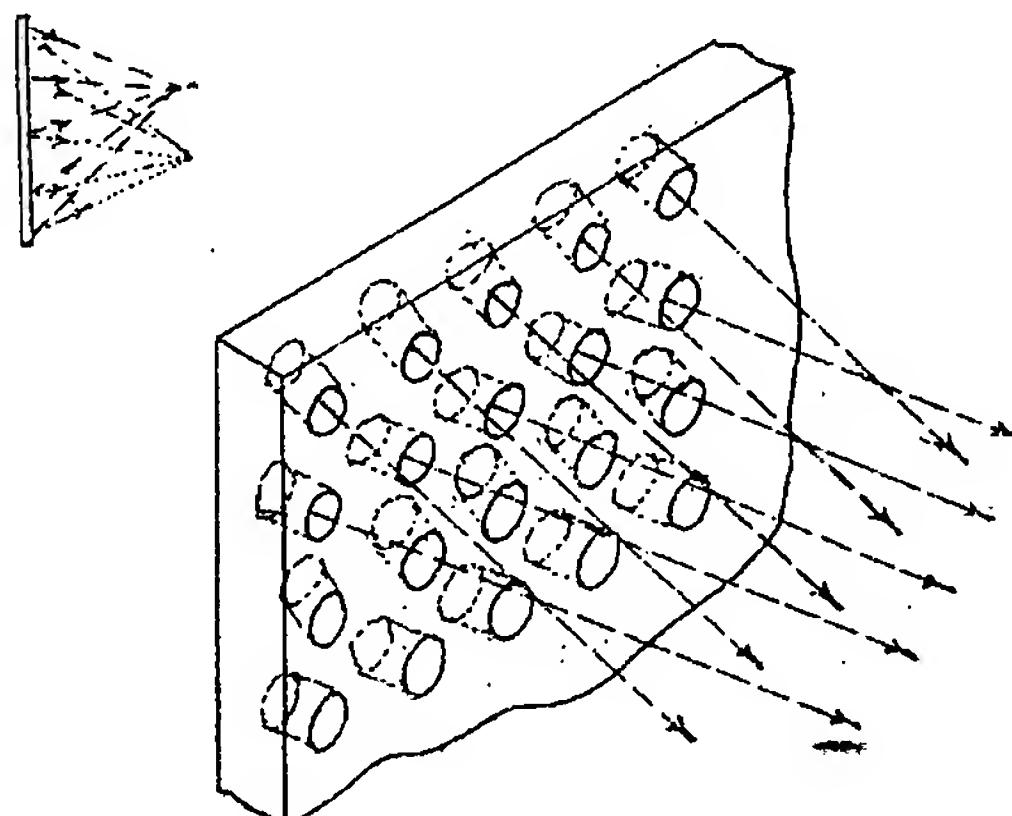
(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM,

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: STEREOSCOPIC IMAGING DEVICE AND MEANS FOR CONSTRUCTION THEREOF



(57) Abstract: A stereoscopic display device comprises a display device for displaying a pixellated display image; and a stereoscopic conversion screen. The conversion screen comprises an array of light guiding members, each light guiding member being associated with an underlying pixel or sub-array of pixels, and wherein alternate rows of light guiding members are arranged to direct light from the associated pixel or sub-array of pixels to different viewing positions. The invention provides spatial multiplexing of images into successive horizontal rows, rather than in vertical columns, as is common practice. This can resolve a looming problem so that a stereoscopic effect is perceived across the full width of the 2D-image. This spatial multiplexing screen may be combined with a dynamic temporal multiplexing arrangement to increase the number of views. The invention also relates to such a dynamic temporal multiplexing system. The display device may be switchable between 2D and 3D modes of operation by using electro chromic materials, or by removing the conversion screen.

WO 2005/018240 A1